

REMARKS

The Office Action dated September 3, 2003 has been reviewed. Applicants thank the Examiner for allowing claim 25. Claims 22 and 26 have been amended. Claims 2-3, 5-13, 15 and 17-27 are pending, and are respectfully submitted for reconsideration by the Examiner.

Claims 2-3, 5-13, 15, 17-20, 22-24, and 26-27 are rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 5,584,278 to Satoh et al. ("Satoh"). Claim 21 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Satoh. These rejections are traversed.

Claim 3 recites a system for controlling evaporative emissions of a volatile fuel, including "a first sub-chamber extending from the first port to the aperture and being defined by the interior partition, the central portion of the diaphragm, and the first section of the housing" and "a second sub-chamber extending from the aperture to the second port and being defined by the interior partition, the intermediate portion of the diaphragm, and the second segment of the second section of the housing." The first port is in fuel vapor communication with a fuel vapor collection canister. The second port is in fuel vapor communication with a fuel tank.

Support for these features can be found, for example, in Applicants' Figures 2 and 3, which show the first sub-chamber 132, a first port 122c, the aperture 126, the interior partition 124, the central portion 162 of the diaphragm 160, and a first section 130 of the housing 120. These Figures further show a second sub-chamber 152, a second port 122t, the intermediate portion 166 of the diaphragm 160, and a second segment 150 of a second section 140 of the housing 120. An operational relationship of the ports and the portions of the diaphragm is explained in Applicants' specification as originally filed at, for example, paragraphs 0028 and 0029.

It is submitted that neither the first check valve 22, nor the second check valve 40, of Satoh, teaches or suggests the combination of features recited in claim 3. In consideration of second check valve 40, and referring to Figs. 1 and 3 of Satoh, the central portion of second diaphragm 104, and the cylindrical inner wall 94 forms a chamber in communication with vent tube 44 and tank vapor dome 28. The intermediate portion of second diaphragm 104, and housing 92b forms a chamber in communication with vent tube 36 and vapor canister 34. Thus the second check valve 40 of Satoh shows that vapor pressure from a fuel tank acts on the central portion of a diaphragm, and vapor pressure from a vapor canister acts on the intermediate portion

Not language in claim 3

of the diaphragm. This is in contrast to Applicants' invention of claim 3 wherein vapor pressure from a fuel tank acts on the intermediate portion of a diaphragm, and vapor pressure from a vapor canister acts on the central portion of the diaphragm. In consideration of the first check valve 22 of Satoh, the central portion of first diaphragm 74 and the cylindrical wall 60 form a chamber in communication with vapor passageway 64, vapor tube 24 and tank vapor dome 28. The intermediate portion of first diaphragm 74 and housing 52b form a chamber in communication with vapor passageway 70, vent tube 36 and vapor canister 34. So the first check valve 22 of Satoh suffers from the same deficiencies as the second check valve 40. Namely, vapor pressure from a fuel tank acts on the central portion of a diaphragm, and vapor pressure from a vapor canister acts on the intermediate portion of the diaphragm. Accordingly, it is respectfully submitted that claim 3 is patentable. Withdrawal of the rejection under 35 U.S.C. § 102(b), of claim 3, is requested.

Applicants have amended claims 22 and 26. Claims 22 and 26 each recite a method of controlling fuel vapor flow between an evaporative emission space of a fuel tank and a fuel vapor collection canister, including providing a fuel tank isolation valve. The valve includes a housing having a first port being adapted for fuel vapor communication with the evaporative emission space of the fuel tank and including a second port being adapted for fuel vapor communication with the fuel vapor collection canister. The valve includes a diaphragm having a central portion, a peripheral portion being fixed with respect to the housing, and an intermediate portion extending between the central and peripheral portions. The method includes moving the diaphragm to the first configuration in response to a second pressure level at the second port acting on the central portion of the diaphragm, and moving the diaphragm to the second configuration in response to a first pressure level at the first port acting on the intermediate portion of the diaphragm. At least for the above-described reasons with respect to the rejection of claim 3, it is submitted that Satoh also does not teach or suggest the combination of features recited in amended claims 22 and 26.

Claims 17 and 19 each recite a fuel tank isolation valve having a first port adapted to be connected in fluid communication with a fuel vapor collection canister, and an interior partition defining an aperture. A first sub-chamber extends from the first port to the aperture. It is respectfully submitted that Satoh fails to show at least the features of a first port adapted to be

connected in fluid communication with a fuel vapor collection canister, and a first sub-chamber extends from the first port to the aperture, as recited in claims 17 and 19.

Accordingly, Applicants respectfully submit that claims 17, 19, 22 and 26 are patentable. Claim 2 depends from claim 3, claims 5-13, 15 and 18 ultimately depend from claim 17, claims 20-21 depend from claim 19, claims 23-24 ultimately depend from claim 22, and claim 27 depends from claim 26. The dependent claims recite the same combination of allowable features recited in the respective independent claims, as well as additional features that further distinguish over the prior art. At least for the above-described reasons, Applicants respectfully request that the rejection under 35 U.S.C. § 102(b), of claims 2, 5-13, 15, 17-20, 22-24, and 26-27, and the rejection under 35 U.S.C. § 103(a), of claim claim 21, be withdrawn. It is respectfully submitted that all pending claims (*i.e.* claims 2-3, 5-13, 15 and 17-27) are in condition for allowance.

*adapted to
be connected
means nothing*

CONCLUSION

In view of the foregoing, Applicants respectfully request reconsideration and the timely allowance of the pending claims. Should the Examiner feel that there are any issues outstanding after consideration of this response, the Examiner is invited to contact Applicants' undersigned representative to expedite prosecution.

If there are any other fees due in connection with the filing of this response, please charge the fees to our Deposit Account No. 50-0310. If a fee is required for an extension of time under 37 C.F.R. § 1.136 not accounted for above, such an extension is requested and the fee should also be charged to our Deposit Account.

Respectfully submitted,

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